



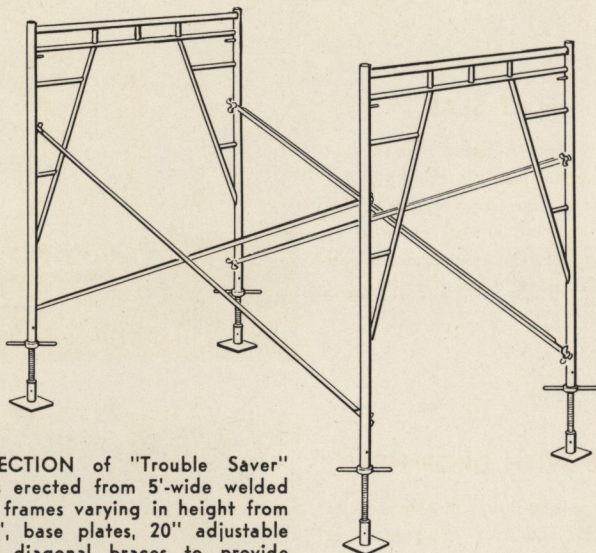
SPHERICAL TRIANGLE forms the thin-shell concrete dome of this modern 1,200-seat auditorium at Massachusetts Institute of Technology. Forms for the spectacular dome, supported at only three

points 160' apart with a rise of 45', were supported by 1400 "Trouble Saver" Sectional Shoring frames spaced 7' apart. George A. Fuller Co. was the contractor.

MODERN SHORING for Concrete Construction

"Trouble-Saver" Sectional Steel Shoring
Burton's Adjustable Single Shores
"TubeLox" Shoring

THE PATENT SCAFFOLDING CO., Inc.



BASIC SECTION of "Trouble Saver" Shoring is erected from 5'-wide welded steel end frames varying in height from 3' to 6'6", base plates, 20" adjustable legs, and diagonal braces to provide spacing 2'6" to 7'.

"Trouble-Saver"® Sectional Shoring

What it is, How it Cuts Costs

WITH THE TREMENDOUS acceptance being given to "Trouble Saver" Sectional Steel Scaffolding throughout the country it is only natural that this equipment should have found logical adaption to concrete shoring. The use of "Trouble Saver"

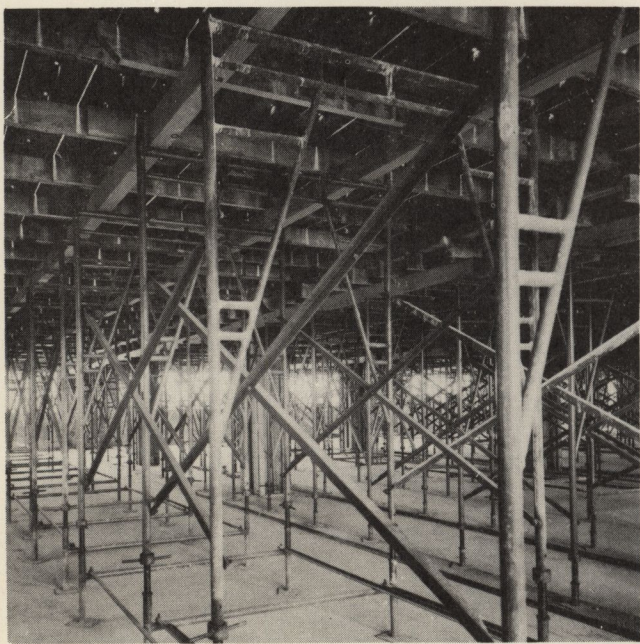
equipment for masonry and allied work has been dictated by the money-saving advantages which have accrued to its users. These same advantages are now being put to work on many jobs where "Trouble Saver" components have replaced crude old-fashioned wood shoring.

These prefabricated sections are as simple to erect for shoring as they are for scaffolding. The same familiar components — base plates, adjustable extension legs, welded frames, and diagonal braces — are assembled quickly under job conditions to provide free standing shoring sections perfectly suited to the easy placing of stringers, joists, and plywood. With "Trouble Saver" sections there is a minimum of nailing of your forming lumber and consequently a maximum of reuse.

20" Legs Speed Erection

"Trouble Saver" 20" adjustable legs eliminate the need for cutting, fitting, and wedging. They adjust quickly to the exact height required. For stripping there is no easier arrangement than the lowering of the sections with these legs, and, because the use of wood is minimized, the dangers of fire are practically eliminated.

"Trouble Saver" Shoring sections provide a scaffold within your shoring — for forming, stripping, and placing or removing pans, or any



MODERN PREFABRICATED "Trouble Saver" Shoring makes a neat, safe installation. Here it was used to support floor slab on building for Fluor Corp., Los Angeles. William J. Moran Co., was the general contractor.



SCRAP LUMBER is a big headache when shoring with wood. A lot of expensive hand work would be required on this lumber before it can be used on another job.

other work. You automatically provide your men with a working level below the slab. There is no waste lumber: Just add plank to the "Trouble Saver" sections.

"Trouble Saver" sections are engineered units, erected from components approved by Underwriters Laboratories, Inc., and specifically designated to carry loads in excess of typical concrete shoring requirements. For example, 5'-wide frames spaced 5' apart will, with a safety factor of 3, support a load of 7,000# per frame, or the equivalent of a normally reinforced 5' wide concrete beam over 22" thick.

Meets All Demands

The total load to be carried can be increased by reducing the distance between frames. Generally the frames are spaced to satisfy the loadbearing capacity of the stringers and joists you intended to be used. "Trouble Saver" sections are normally more than equal to any demands you may have in that connection.

Remember that for many years leading contractors throughout the country have used "Trouble Saver" Sectional Scaffolding for many types of work. These include brick-laying, stone renovation, remodeling, building repairs, roofing, pointing up masonry, installing glass brick, demolition, plastering and painting.

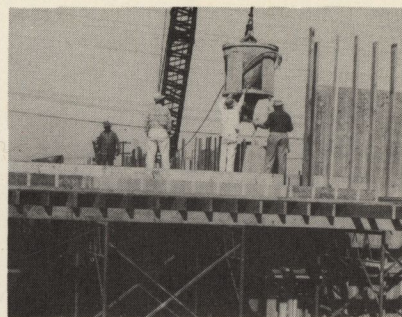
"Trouble Saver" Shoring sections have come into widespread use for modern concrete construction because contractors are conscious of the safety, efficiency and economy of the prefabricated, free-standing, easily-erected welded steel sectional components.

The nationwide organization and engineering facilities of PS Co are ready to help you apply the money-saving principles of steel shoring by means of "Trouble Saver" components, Burton's Single Shores, or "TubeLox" Shoring. With these three types of equipment PS Co. alone is equipped to handle efficiently any type of concrete shoring job by proven methods.

RENTALS • SALES

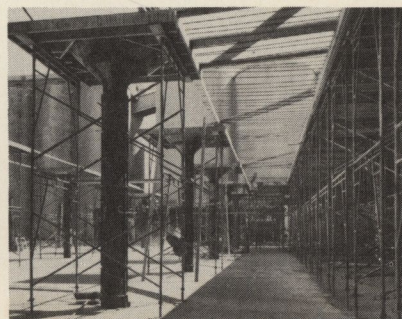
FLAT SLAB

Concrete floor is being poured during construction of building for Fluor Corp., Los Angeles. Note details of forming lumber and use of crane for pouring interior walls and slab. William J. Moran is the general contractor.



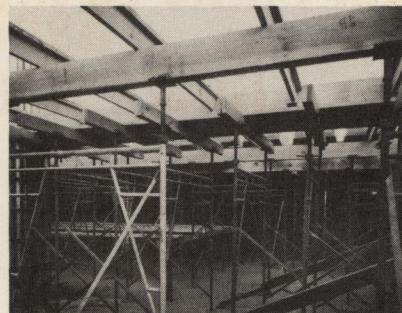
SLAB WITH DROP HEAD

This large warehouse in Minneapolis called for 106 drop head columns. Notice how simple it is to erect "Trouble Saver" Shoring frames for this type of construction. Watson Construction Co., Minneapolis, general contractor.



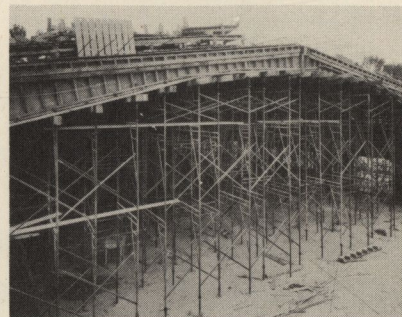
PAN JOIST

"Trouble Saver" Shoring on Consolidated Engineers' Corp., building, Pasadena, Calif., provides everything except planking for removal of pans. Note how inverted extension legs give extra headroom for installing and removing pans.



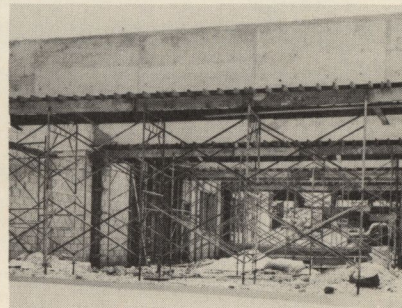
POURED ARCH

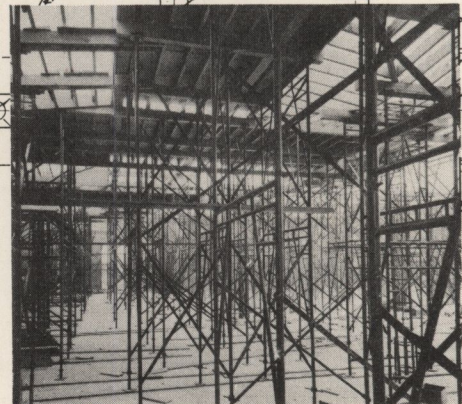
Interlacing of "Trouble Saver" frames provided 2'6" spacing with 5' braces on this poured arch job at Marine Corps Base, El Toro, Calif. Maximum load was 1700 lbs. per lineal foot. Allison Honer Co., general contractor.



BEAM

Only 10 "Trouble Saver" Shoring frames were required to shore this 40'x52"x12" beam poured during construction of garage for the City of Miami.

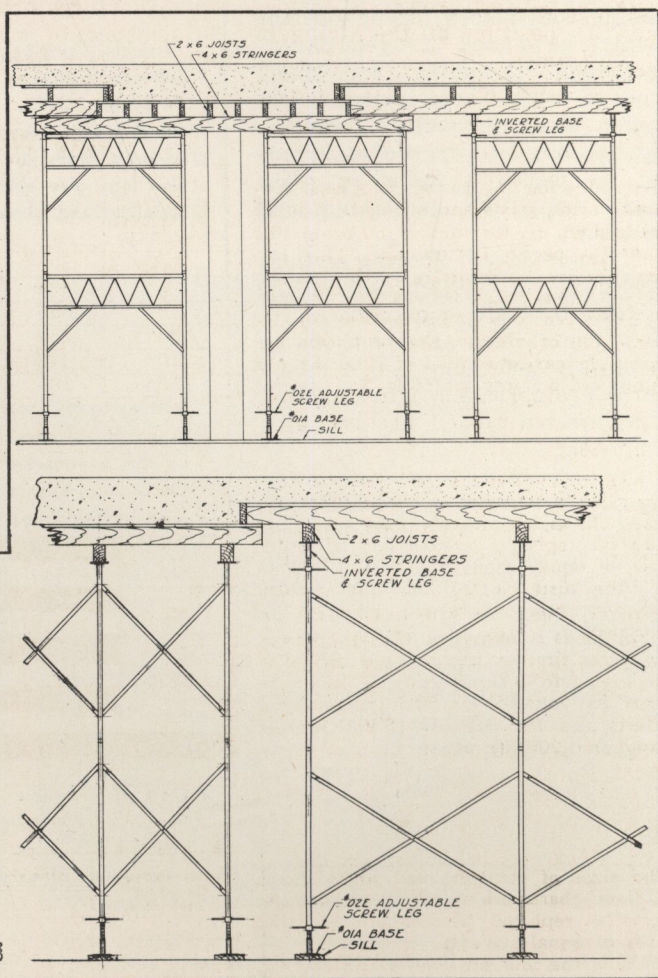
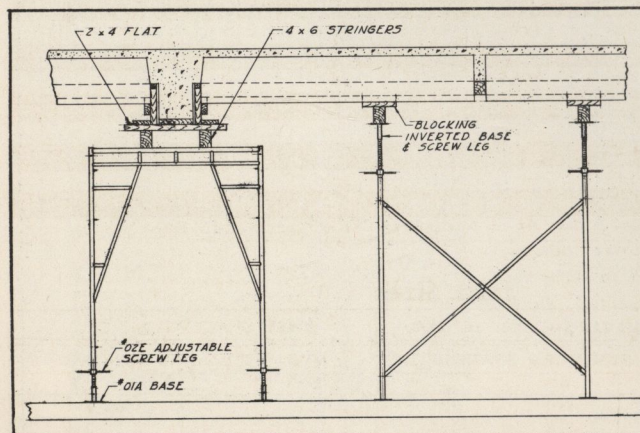




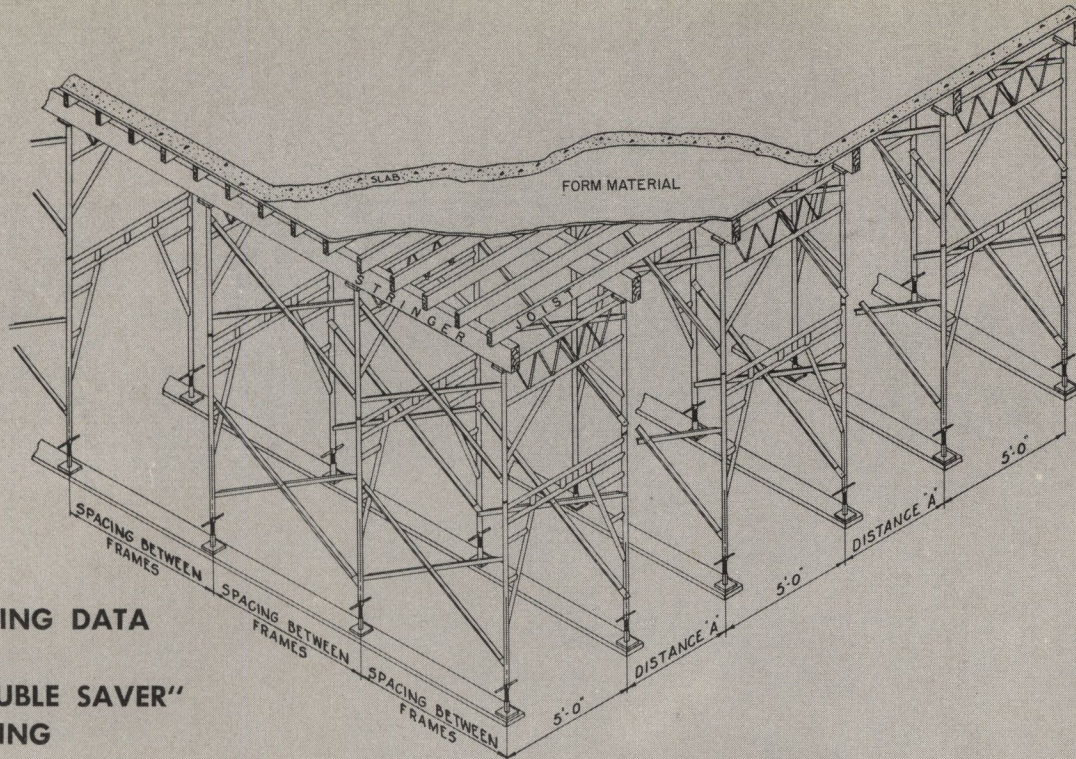
"TROUBLE SAVER" Shoring jobs are completely engineered to carry the desired loads, to give the most efficient installation, to speed your pouring schedule. There is no guesswork.

This modern system of prefabricated shoring cuts costs and relieves contractors of the problems and responsibilities common to wood shoring.

The detail drawing above shows how "Trouble Saver" Shoring was laid out for the Midwest Rubber Plant, Paramount, Calif. McNeil Construction Co., general contractor. Photo shows a small portion of the neat, safe installation that resulted.



ADJUSTABLE LEGS and base plates inverted in frame legs are frequently used for shoring flat slab with drop heads (two drawings at right) and for pan joists (drawing at left).



LOADING DATA ON "TROUBLE SAVER" SHORING

SAFE WORKING loads for "Trouble Saver" shoring vary according to three things: (1) Spacing between frames in the same row, (2) distance between rows of frames and (3) position of the stringers on the frames.

Maximum safe working loads are allowed when the spacing between each frame and the distance between rows of frames is small. Minimum distances between frames can be achieved by interlacing frames with standard bracing.

"Trouble Saver" Shoring will take largest loads when the stringers are placed directly over the frame legs, by means of inverted base plates. If this is not practicable, stringers should be placed as close as possible to frame legs.

Safe Working Loads in Lbs. Per Square Foot WITH STRINGERS OVER FRAME LEGS

Determine loading per sq. ft. due to concrete, forms, joists and stringers (use 15 lbs. per sq. ft. for lumber). Locate this load (lbs. per sq. ft.) on chart. Then follow this line horizontally to the left for the spacing between frames. For distance "A" between rows of frames use the figure at top of column. Figures shown are based on maximum load of 7000 lbs. per frame and a safety factor of 3.

SPACING BETWEEN FRAMES	DISTANCE "A" BETWEEN FRAMES							
	6"	1'	2'	3'	4'	5'	6'	7'
2'6"	509	466	400	350	312	280	254	233
3'0"	424	388	333	291	259	233	212	194
3'6"	358	333	285	250	222	200	181	166
5'0"	254	233	200	175	155	140	127	116
6'0"	212	194	166	145	129	116	106	97
7'0"	181	166	142	125	111	100	90	83

Stringer Sizes

The sizes of stringers and joists shown in these charts are merely examples, and may be replaced by timbers of other sizes of equal strength.

Using distance "A" and the spacing between frames select stringers.

For loads in excess of 150 lbs. per sq. ft., larger timbers can be used to utilize the high safe working loads in the above chart. All values in the Stringer and Joist Charts are for dressed (S4S) lumber based on 1,200 lbs. per sq. in. fiber stress.

SPACING BETWEEN FRAMES	DISTANCE "A" BETWEEN FRAMES							
	6"	1'	2'	3'	4'	5'	6'	7'
3'	4x4	4x4	4x4	4x4	4x4	4x4	4x4	4x4
	4x4	4x4	4x4	4x4	4x4	2x8	2x8	2x8
5'	2x8	2x8	2x8	2x8	2x8	4x6	4x6	4x6
	4x6	4x6	4x6	2x10	2x10	—	—	—
6'	4x6	4x6	4x6	4x6	2x10	2x10	2x10	—
	2x10	2x10	2x10	—	—	—	—	—
7'	4x6	4x6	2x10	2x10	4x8	4x8	—	—
	4x8	4x8	—	—	—	—	—	—

1—Upper sizes are for loads up to 100 lbs. per sq. ft.
2—Lower sizes are for loads up to 150 lbs. per sq. ft.

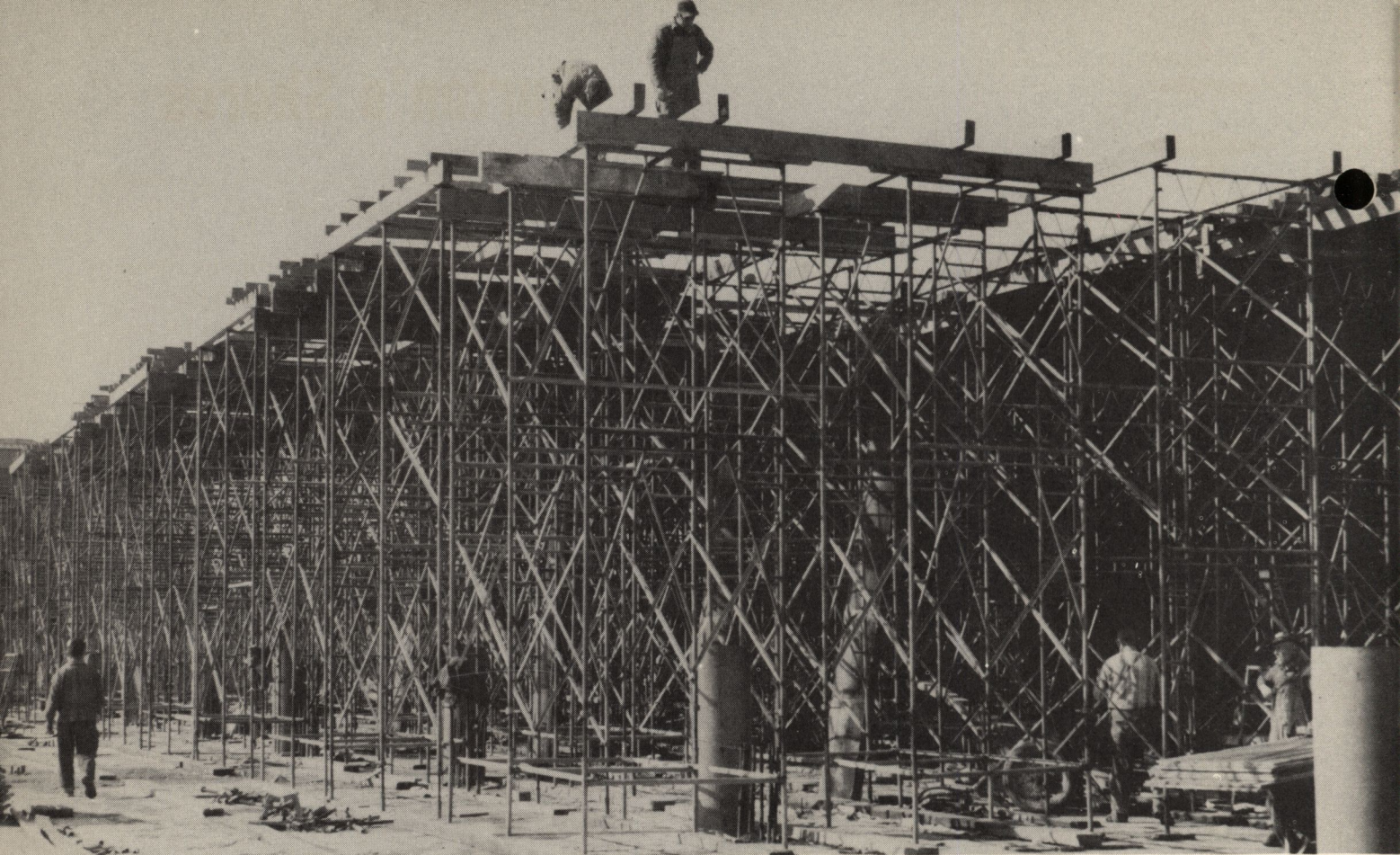
Joist Sizes

The sizes of stringers and joists shown in these charts are merely examples, and may be replaced by timbers of other sizes of equal strength.

Using the concrete load and maximum stringer spacing select joist.

Maximum stringer spacing is either 5' or distance "A" whichever is larger.

Load #/sq. ft. up to and Including	JOIST SPACING—12" or 16" O.C.			JOIST SPACING—24" O.C.		
	MAX. STRINGER SPACING			MAX. STRINGER SPACING		
	5'	6'	7'	5'	6'	7'
75	2x4	4x4	4x4	4x4	4x4	2x8
100	4x4	4x4	4x4	4x4	4x4	2x8
125	4x4	4x4	2x8	4x4	2x8	2x8
150	4x4	2x6	2x8	2x8	2x8	4x6



FOUR STORY WAREHOUSE for Colgate-Palmolive Peet Co. goes up on Jersey City, N. J. waterfront. Floor slabs varied from 10" to 12" thick, and were shored with 6'6"- and 5'-high "Trouble Saver" frames. Ceiling heights were 19' and 22'.

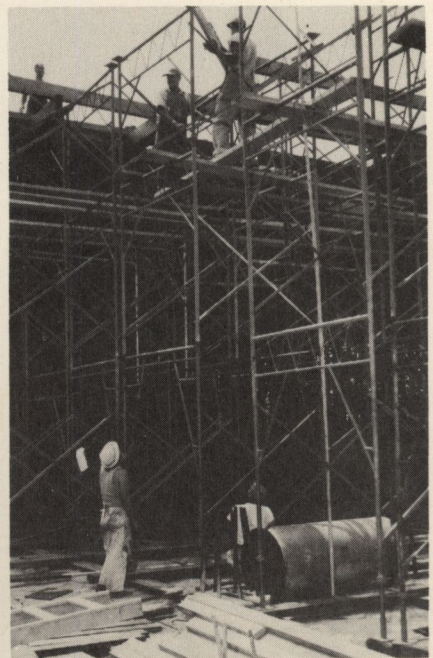
6,300 Frames Used on Warehouse Job

NEARLY A half-million pounds of "Trouble Saver" Shoring was used during construction of the new four-story 200' x 466' warehouse for Colgate-Palmolive Peet Co., in Jersey City, N. J. It is one of the largest concrete shoring jobs ever performed with scaffolding components.

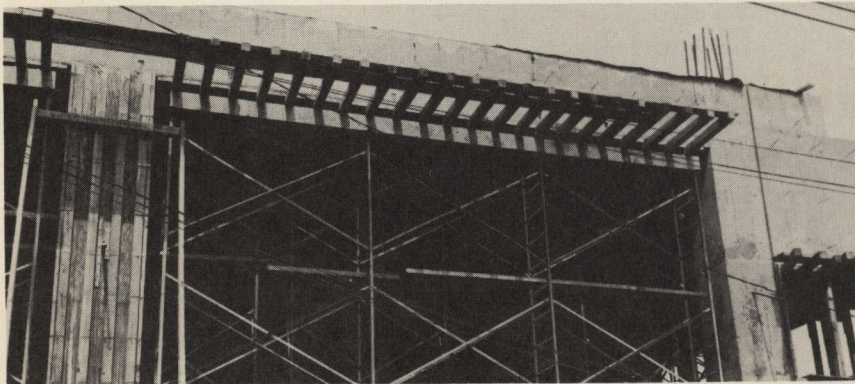
"Trouble Saver" Shoring was particularly suitable because the

free-standing sections required no extra bracing even for the 22'-high ceilings.

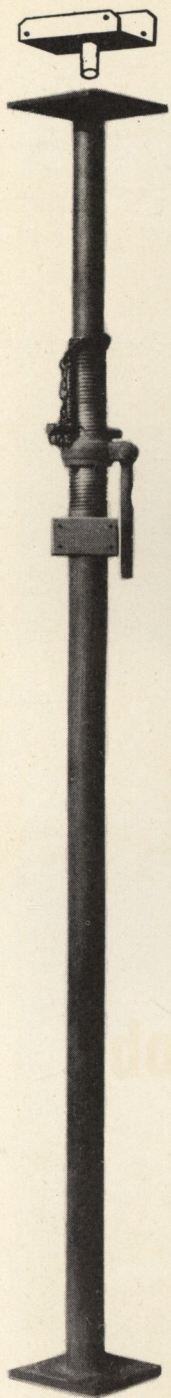
George A. Fuller Co., general contractor, used 300 2'-wide "Trouble Saver" Ladder Scaffolds, on 7' spacing, for shoring of heavy span-drels, in addition to the 6,300 frames for floor slabs. Drop heads 15" thick were shored with "Trouble Saver" frames on 5' spacing.



CARPENTERS LEVEL shoring as men on ground make final adjustments. Note inverted base plates in each frame leg to provide firm platform for stringers.



24"-WIDE LADDER frames were used to shore the 37" beams. Use of these units made it easier to place the load directly over the legs.



HIGHEST PRAISE for Burton's Shores comes from C. R. Park, California general contractor, who says "they are the best we have ever used."

Burton's Shores

IN CERTAIN TYPES of construction, particularly those involving close quarters, single post shores are sometimes advantageous.

For this type of work, the Burton All Steel Shore is ideal. Four sizes permit working heights to 16'.

Burton Shores have eight adjusting holes, for rough adjustments. The convenient 8"-long handle permits close adjustments. The adjusting collar nut can be tightened to prevent tampering.

Standard Burton Shores, have 7" x 7" base plates and heads. U-heads, 8" or 14" long, fit into the top of the tube without any disassembly. Plates mounted on Shores permit easy longitudinal bracing when necessary.

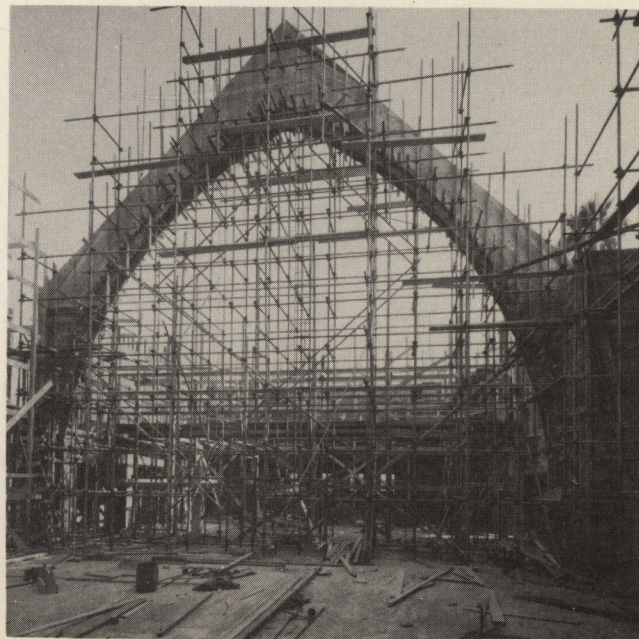
SPECIFICATIONS

Size	Adjustment		Amt. of Adjustment	Wt.	Safe Working Capacity	
	From	To			Fully Closed	Fully Extended
#1	5'7"	9'10"	4'3"	50#	14,500#	5,100#
#2	6'7"	10'10"	4'3"	54#	10,500#	5,450#
#3	8'2½"	12'5½"	4'3"	58#	8,300#	4,700#
#4	11'	16'	5'	72#	5,300#	2,400#

SAFETY FACTOR OF 3

"TubeLox"® Shoring

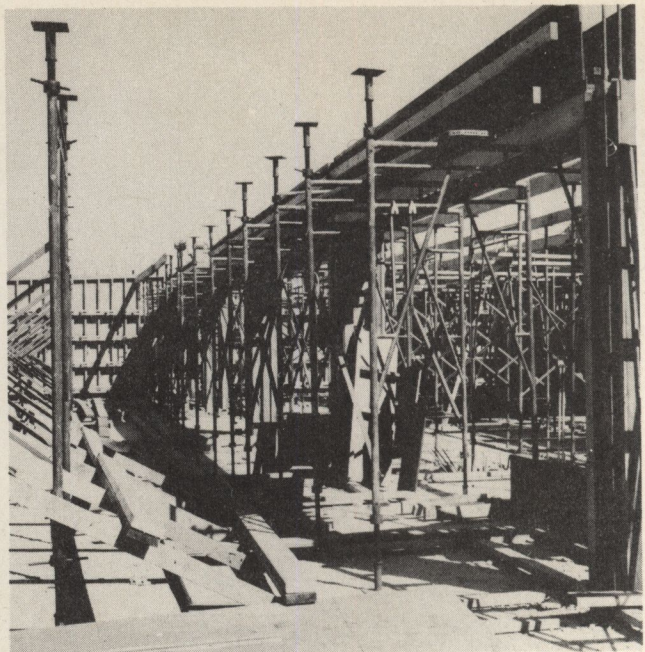
"TUBELOX" Shoring is often used to advantage on jobs of extreme height. Basically, "TubeLox" Shoring consists of interlocking steel tubes 6', 8', 10' and 16' long. Horizontal and diagonal members are formed from the same components, and are joined to the verticals by means of couplers.



"TUBELOX" SHORING is ideal for special installations. On the Immaculate Conception Church, Monrovia, Calif., TubeLox provided shoring and scaffolding. J. A. McNeil Co., general contractor.



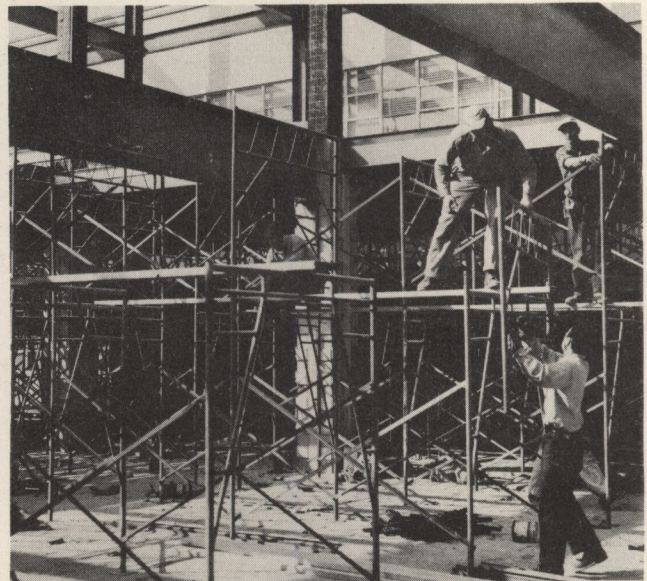
COST CUTTING technique in concrete shoring involves the use of plywood panels set directly on I-beams. This system eliminated a good deal of forming and stripping costs for Morris Burk, contractor, during construction of cabanas at the Blue Horizons Hotel, Miami.



EXTENSION LEGS can be placed on the top as well as on the bottom of frame legs to provide a second shoring level with the same frame. Marine Corps Air Station, El Toro, Calif. Allison Honer Co., general contractor.



TRUSSED WORTHY—To shore this 56,000 square foot warehouse building in Irving, Texas, Maridan Construction Co., rented 360 6'6"-high "Trouble Saver" Shoring frames.



ERECTOR'S INSTALL "Trouble Saver" Shoring frames to support formwork on three-story addition to Union Oil Co., office building, San Francisco. Engineers Limited is the contractor.

RENTALS • SALES

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For Greater Safety . . . Efficiency . . . Economy



THE PATENT SCAFFOLDING CO., Inc.

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(HARTFORD).....2545 Berlin Tpke., Newington, Conn.
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MIAMI 38, Fla.....7140 N. Miami Ave.
MILWAUKEE 4, Wis.....135 E. Pittsburgh Ave.
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PITTSBURGH 12, Pa.....1254 Voskamp St., N.S.
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